

AMENDMENTS TO THE CLAIMS

Claims 1-38 (cancelled)

Claim 39. (currently amended): A capacitor comprising:

a first conductive material layer having a first level and a second level, said first and second levels being connected by at least two sidewall regions between said first and second levels; and

an ion implantation doped BST high dielectric constant thin film material having a substantially homogenous ~~uniform~~ stoichiometry formed over said ~~at least first level,~~ two sidewall regions, and ~~over said~~ second level;

wherein said ion implantation doped BST high dielectric thin film material is a continuous layer at least on said two sidewall regions and said second level; and

a second conductive material layer over said ion implantation doped BST high dielectric thin film material.

Claim 40 (cancelled).

Claim 41. (currently amended): The capacitor according to claim 39, wherein said ion implantation doped BST thin film material includes a ~~is doped with a~~ dopant selected from the group consisting of barium, strontium and titanium.

Claim 42. (cancelled).

Claim 43. (cancelled).

Claim 44. (currently amended): The capacitor according to claim 41 ~~43~~, wherein said ion implantation doped BST high dielectric thin film material contains a titanium Ti percentage of from about 50% to about 53.5% throughout said BST high dielectric thin film material.

Claim 45. (currently amended): The capacitor according to claim 44, wherein the ratio of barium to strontium Ba to Sr ~~Ba to Sr~~ is about 70:30.

Claim 46 (currently amended): The capacitor according to claim 39, wherein said capacitor ~~ion implantation doped BST high dielectric thin film material~~ is included in a DRAM cell.

Claim 47-73. (cancelled).

Claim 74. (currently amended): An integrated circuit capacitor device comprising:

a first electrode having a first level and a second level, said first and second levels being connected by at least two sidewall regions between said first and second levels; and

an ion implantation doped BST high dielectric constant thin film material having a substantially homogenous ~~uniform~~ stoichiometry formed over said at least two sidewall regions and over said second level;

wherein said ion implantation doped BST high dielectric thin film material is a continuous layer at least on said two sidewall regions and said second level; and

a second electrode provided on said ion implantation doped BST high dielectric thin film material.

Claim 75. (currently amended): The integrated circuit capacitor device according to claim 74, wherein said ion implantation doped BST high dielectric constant thin film material includes a dopant ~~dopants are~~ selected from the group consisting of barium, strontium and titanium.

Claim 76. (cancelled).

Claim 77. (cancelled).

Claim 78. (currently amended): The integrated circuit capacitor device according to claim ~~75~~ 76, wherein said doped BST high dielectric thin film material has ~~is doped with Ti to maintain a titanium~~ Ti percentage of from about 50% to about 53.5% throughout said BST high dielectric thin film material.

Claim 79. (currently amended): The integrated circuit capacitor device according to claim 78, wherein the ratio of barium to strontium ~~Ba to Sr~~ is about 70:30.

Claim 80. (original): The integrated circuit capacitor device according to claim 74, wherein said first and second electrodes are selected from the group consisting of Pt, Ru, Ir, Pd, Au ruthenium oxides, and iridium oxides.

Claim 81. (original): The integrated circuit capacitor device according to claim 74, wherein said integrated circuit capacitor is a container capacitor.

Claim 82. (previously presented): The integrated circuit capacitor device according to claim 74, wherein said integrated circuit capacitor is formed over a stud.

Claim 83. (previously presented): The integrated circuit capacitor device according to claim 74, wherein said integrated circuit capacitor is fabricated in a DRAM cell.

Claim 84-93 (cancelled).

Claim 94. (currently amended): A capacitor comprising:

a first conductive material layer having a first level and a second level, said first and second levels being connected by at least two sidewall regions between said first and second levels; and

an ion implantation doped high dielectric constant thin film material, said high dielectric thin film material having a general formula of ABO_3 and having a substantially homogenous ~~uniform~~ stoichiometry formed over said at least two sidewall regions and over said second level,

wherein said ion implantation doped high dielectric thin film material is a continuous layer at least on said two sidewall regions and said second level; and

a second conductive material layer over said ion implantation doped BST high dielectric thin film material.

Claim 95. (currently amended): The capacitor according to claim 94, wherein A of said formula ABO_3 is selected from the group consisting of ~~comprising~~ Ba, Bi, Sr, Pb, Ca, La, and any combination thereof.

Claim 96. (currently amended): The capacitor according to claim 94, wherein B of said formula ABO_3 is selected from the group consisting of ~~comprising~~ Ti, Zr, Ta, Mo, W, Nb, and any combination thereof.

Claim 97. (previously presented): The capacitor according to claim 96, wherein said ion implantation doped high dielectric constant thin film material contains a percentage of Ti of approximately 50% to approximately 53.5% throughout said high dielectric constant thin film material.

Claim 98. (new) The capacitor according to claim 94, wherein A of said formula ABO_3 is at least one member selected from the group consisting of Ba, Bi, Sr, Pb, Ca, and La, and B of said formula ABO_3 is at least one member selected from the group consisting of Ti, Zr, Ta, Mo, W, and Nb.

Claim 99. (new) The capacitor according to claim 98, wherein said ion implantation doped high dielectric constant thin film material includes a dopant selected from the group consisting of Ba, Bi, Sr, Pb, Ca, La, Ti, Zr, Ta, Mo, W, Nb, and any combination thereof.